

12-o-tetradecanoyl-phorbol-13-acetate가 -hCG



=ABSTRACT=

Effects of 12-o-tetradecanoyl-phorbol-13-acetate on -hCG secretion by cultured peripheral mononuclear cells during pregnancy

Dong-Hyun Cha, M.D., Seung-Min Yoo, M.D.*, Kyung-Hee Min*
Duk-Ryung Kim*, Keun-Ha Kim*, Yun-Joon Sung, M.D.
Dong-Kyu Kim, M.D., Byung-Seok Lee, M.D., Kyung Seo, M.D.
Yoon-Ho Lee, M.D., Kook Lee, M.D.

Department of Obstetrics and Gynecology, Yonsei University, College of Medicine, Seoul,
Department of Microbiology and Immunology, College of Medicine, Eulji University, Daejeon*, Korea

Objective : Peripheral blood mononuclear cells (PBMC) in culture release a biologically active human chorionic gonadotropin (hCG). This effect is detectable during pregnancy with a maximum between the 16th and 19th week. HCG plays an important role for the corpus luteum rescue during the early gestational age and possibly for the immunotolerance. This study was performed to investigate the relationships between the productivity of cultured PBMC of pregnant women and the ability to maintain early pregnancy, and whether 12-o-tetradecanoyl-phorbol-13-acetate (TPA) increases hCG secretion by cultured PBMCs.

Materials and Methods : PBMC were obtained from 20 pregnant women between 16th to 19th week of gestation, and cultured with TPA. Culture cells were harvested and hCG mRNA were extracted and RT-PCR were performed. Culture supernatants were collected and hCG concentration were determined by commercial RIA methods.

Results : The mean age was 31.0 years old, 19 of 20 (95%) pregnant women's PBMC secreted hCG and expressed hCG mRNA, but in control group except male hepatitis B patient, none of them produced hCG. TPA activated expression of hCG in PBMC in linear manner.

Conclusion : Pregnant women's cultured PBMC secreted hCG, but not in non-pregnant or male. We could confirm the mRNA of hCG in PBMC as well in the placental control. The productivity of hCG in PBMC might be closely related with maintenance of early pregnancy.

Key words : PBMC, pregnancy, TPA, hCG

Human Chorionic Gonadotropin (hCG)	.1	hCG가
(trophoblast cells)		가
(corpus luteum)	(decidual-	hCG
zation)	(progesterone)	, ^{2,3,4,5} -hCG가
	IL-2	sIL-2R

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6 hCG가 가 400 × g, 15 30 (peripheral blood mononuclear cell, PBMC) PBMC HBSS 3 hCG trypan blue dye exclusion test 10% FBS, 250 U/M ℓ penicillin, 250 μ g/M ℓ streptomycin 가 RPMI-1640 1 × 10⁷ /M ℓ , 96 well culture plate 250 μ 5% CO₂, 37 40 ng/M ℓ TPA 가 12 24 well 250 μ hCG radioimmunoassay -20 -hCG mRNA 1998 Alexander ¹⁶ (Natural killer cell, NK cell) (monocyte) hCG가 , IL-1 , IL-4, IL-6, IL-10, TNF GM-CSF hCG IL-2 INF- hCG hCG 가 hCG hCG mRNA , TPA가 hCG hCG RT-PCR 1. 2000 1 2000 3 16 19 20 2. 1) 2.5M ℓ Hank's Balanced Salt Solution (HBSS, pH 7.2) 가 , 4M ℓ Ficoll-Paque [Pharmacia] 15ml conical centrifuge pasteur pipette